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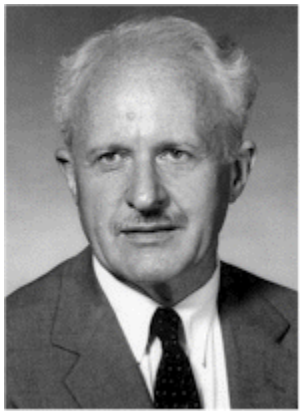

A TRIBUTE TO WALTER RAMBERG
1904-1985
by C.E. Taylor

Dr. Walter Ramberg was the tenth president of the SESA. He was born as Walter Gustave Charles Ramberg in Florence, Italy on February 16, 1904. His father, also named Walter Ramberg, was a German archeologist and his mother, Lucy Dodd Ramberg, was a U.S. citizen, a painter, and a daughter of pioneers to the American West. Walter became a resident in the United States in 1920 and was made a U.S. citizen by special act granting citizenship to minor children of U.S. citizens.

After two years at Reed College, Portland, OR, Walter transferred to Cornell University where he graduated with honors in physics in 1926. In 1928, after two years in industry, Walter returned to academia to pursue a doctors degree at the Technische Hochschule in Muenchen (Munich) Germany. There he attended courses in mathematics and theoretical physics under Professor Sommerfeld and carried out research on the nature of the electric arc for a doctors thesis (under Professor Zenneck).

In 1930, Walter married Elizabeth Lineberger of Belmont, NC and they had three children, Walter Dodd, Julia, and Lucy Dodd. Elizabeth died on October 30, 1980.

His son said that Walter got into mechanics and stress analysis by accident. He had intended to continue working in high voltage applications, but he arrived back in the United States in 1930, during the Great Depression. Westinghouse had no position available for him, so his friend, Dr. L.B. Tuckerman, hired Walter as his assistant at the National Bureau of Standards.

Walter’s first work as an assistant physicist involved the experimental and theoretical study of locknuts. Later problems included investigations of indentation hardness, analysis of the mechanics of stratosphere ballooning, studies of propeller vibration and of nonlinear vibrations in aircraft, and brief analyses needed for answering

miscellaneous inquires on many mechanical problems referred to the Bureau of Standards.

From 1936 to 1946 Walter worked as a physicist at the National Bureau of Standards and was directly responsible for aeronautical research projects in the Engineering Mechanics Section. They were engaged with projects for the Bureau of Aeronautics, Navy Department, and NACA (now NASA) to study the tensile and compressive properties of sheet metal, strength of aircraft structures, dynamic tests of structural models, fatigue tests of structural elements, performance tests of wire strain gages and other strain and vibration pickups, development of acceleration and strain measuring devices.

He made periodic visits to aircraft manufacturers throughout the country to explain the NBS research program and obtain from them suggestions for changes in the program to make it more useful to the industry. Walter published prolifically during that period. One of his NACA Tech. Notes (with W.R. Osgood) was “Description of Stress-Strain Curves by Three Parameters,” in which he introduced the famous Ramberg-Osgood Law.

Walter progressed rapidly through the ranks at the Bureau of Standards and in 1947 was made Chief of the Mechanics Division, which then had a total staff of about 115 people. His division included groups working in the field of aircraft structures, large engineering structures, testing for compliance with government specifications, calibration of testing machines, dynamometers, and strain gages.

In 1959 Dr. Walter Ramberg was appointed by President Eisenhower to be Science Officer to the United States Embassy in Rome, Italy. His primary role there was to serve as an Advisor to the Ambassador and his staff in the evaluation of the interaction of science with foreign policy, the assessment of current scientific progress abroad and the enhancement of the liaison between the United States and foreign scientists and engineers. Walter served in that position for twelve years.

In addition to SESA, Dr. Ramberg was also active in and honored by other engineering and scientific societies. In 1957 he received the prestigious Richard L. Templin Award from the American Society for Testing Materials.

When I lived near Washington, DC during the Korean War, Walter regularly attended the monthly meetings of the Washington Area Section of the SESA. We met at the National Bureau of Standards, very probably due to his influence. Although he was obviously extremely talented, he always impressed me as a gentle and modest person with a ready smile. In 1972, Walter and Mrs. Ramberg and I coincidentally joined the same tour group organized in conjunction with the International Union of Theoretical and Applied Mechanics meeting in Moscow. We toured in East Germany, Poland and Russia. It was a special treat for me to spend some time with them after a twenty year interlude. The last time I remember seeing Walter at an SESA meeting was in 1973 at our International Meeting in Los Angeles. At that meeting he presented a paper for a colleague from Portugal who was unable to attend the meeting because of illness.

Having been born in Italy with a German father, an American mother and a French governess, Walter learned to speak German, English, Italian and French at an early age. Later he would spend fifteen minutes each day studying Russian and Spanish. He realized that he spoke with an accent, so he read the Bible into a tape recorder, then listened to himself in order to improve his English pronunciation.

Recently I talked with his son, Walter D., about his father, Walter G. A word that he used to describe his father was “disciplined.” Apparently, he kept a very detailed diary every day, using his own shorthand style. Each morning he would start working at 5:00 am in his office at home and at 7:00 am he would ring a brass bell to awaken the rest of the family. They would all have breakfast together and Walter G. had his “three minute” eggs.

Dr. Walter Ramberg died on October 22, 1985. He should certainly be counted among the distinguished early SESA presidents who left us with a legacy of which we can justifiably be proud.